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47 CFR Part 73

[MM Docket No. 92-123, RM-7992]

Radio Broadcasting Services; Mexico, New York

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: The Commission requests comments on a petition filed by Renard Communications Corp. seeking the allotment of Channel 280A to Mexico, New York, as its first local FM transmission service. Channel 280A can be allotted to Mexico in compliance with the Commission's minimum distance separation requirements without the imposition of a site restriction, at coordinates North Latitude 43-27-34 and West Longitude 76-13-45. Canadian concurrence in the allotment has been requested since Mexico is located within 320 kilometers (200 miles) of the U.S.-Canadian border.

DATES: Comments must be filed on or before August 7, 1992, and reply comments on or before August 24, 1992.

ADDRESSES: Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner, or its counsel or consultant, as follows: Craig L. Fox, President, Renard Communications Corp., 4853 Manor Hill Drive, Syracuse, New York 13215-1336.

FOR FURTHER INFORMATION CONTACT: Leslie K. Shapiro, Mass Media Bureau, (202) 634-6530.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Notice of Proposed Rule Making, MM Docket No. 92-123, adopted May 29, 1992, and released June 16, 1992. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Dockets Branch (Room 230), 1919 M Street NW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractor, Downtown Copy Center, (202) 452-1422, 1714 21st Street NW., Washington, DC 20036.

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding.

Members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1204(b) for rules governing permissible *ex parte* contacts.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Federal Communications Commission.

Beverly McKittrick,

Assistant Chief, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 92-14507 Filed 6-18-92; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 222 and 227

[Docket No. 920545-2145]

Endangered and Threatened Species; Endangered Status for Winter-Run Chinook Salmon

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Proposed rule.

SUMMARY: NMFS has determined that the winter-run chinook salmon in the Sacramento River, California, should be reclassified as an endangered species, rather than threatened, under the Endangered Species Act (ESA) of 1973, as amended, 16 U.S.C. 1531 *et seq.* Although conservation measures have been implemented since 1987 specifically to improve habitat conditions for Sacramento River winter-run chinook salmon, the population has continued to decline precipitously. Over a 25-year period, the population has declined almost 99 percent. The estimated 1991 run size of 191 fish was primarily the result of surviving progeny from the 1988 spawning population of 2,085 fish. The 1991 spawning escapement represents a 90 percent decline in a single generation and indicates that the 1988 year class was almost a total failure (USFWS 1991).

Reclassifying this species as endangered will not result in additional prohibitions against taking because all the protection afforded an endangered species under section 9 of the ESA was applied to the winter-run chinook salmon through regulations when it was listed as threatened (55 FR 46523, Nov. 5, 1990). However, a determination that the species is endangered more accurately reflects the current status of its population. To make this determination, NMFS conducted a status review of the species which is available from (See ADDRESSES).

DATES: Comments on the proposed rule must be received August 18, 1992. Requests for public hearings must be received by August 3, 1992.

ADDRESSES: Comments should be sent to E. Charles Fullerton, Director, Southwest Region, National Marine Fisheries Service, 501 W. Ocean Blvd., suite 4200, Long Beach, CA 90802-4213.

FOR FURTHER INFORMATION CONTACT: James H. Lecky, NMFS, Southwest Region, Protected Species Management Division, 501 W. Ocean Blvd., suite 4200, Long Beach, CA 90802-4213, (310) 980-4015, or Margaret Lorenz, NMFS, Office of Protected Resources, 1335 East-West Highway, Silver Spring, MD 20910, (301) 713-2322.

SUPPLEMENTARY INFORMATION:

Background

Winter-run chinook salmon are a unique population of chinook salmon in the Sacramento River and are distinguishable from the other chinook runs based on the timing of their upstream migration and spawning season. Basic information on the species biology, life history, and habitat requirements is included a status review of the species prepared by NMFS (1992c).

The best data on long-term trends in abundance for winter-run chinook are the annual estimates of spawning run size made by the California Department of Fish and Game (CDFG) based on counts at Red Bluff Diversion Dam. These annual estimates show a dramatic decline in the average run size from 84,000 fish in the years 1967-1969 to about 2,000 for the years 1982-1984 (Table 1). After a further decline in the run size to less than 1,000 fish, NMFS listed the species as threatened under the ESA on November 5, 1990 (NMFS 1992c).

On June 5, 1991, NMFS received a petition from the American Fishery Society to reclassify the status of winter-run chinook salmon from threatened to endangered under the ESA. NMFS reviewed the petition and determined that it contained substantial information indicating such an action might be warranted. On November 7, 1991, NMFS announced (56 FR 56986) its intention to review the status of the species to determine whether reclassification was appropriate. NMFS solicited information on the status of the species and received information and data from the United States Fish and Wildlife Service (USFWS) and the Pacific Coast Federation of Fishermen's

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Associations. Then, NMFS conducted a status review to determine whether the species should be reclassified.

TABLE 1. ANNUAL ESTIMATED RUN SIZE AT RED BLUFF DIVERSION DAM

Year	Number of fish
1967	57,306
1968	84,414
1969	117,808
1970	40,409
1971	53,089
1972	37,133
1973	24,079
1974	21,897
1975	23,430
1976	35,096
1977	17,214
1978	24,862
1979	2,364
1980	1,156
1981	20,041
1982	1,242
1983	1,831
1984	2,663
1985	3,962
1986	2,422
1987	2,236
1988	2,085
1989	547
1990	441
1991	191

Summary of Factors Affecting the Species

Section 4(a)(1) of the ESA specifies five criteria to be evaluated in reviewing the status of a species or population proposed for listing or reclassification. In addition to the evaluation of these factors in this proposed rulemaking, these criteria were reviewed in the first Notice of Determination published February 27, 1987 (52 FR 6041), in a subsequent Notice of Determination published December 9, 1987 (52 FR 49722), in two emergency rules published August 4, 1989 (54 FR 32088) and April 2, 1990 (55 FR 12193), in the proposed rule to list winter-run chinook published March 20, 1990 (55 FR 10260), and in the final rule listing the species as threatened published November 5, 1990 (55 FR 46515).

1. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Modification and loss of spawning and rearing habitat have been major factors contributing to the decline of the winter-run chinook. Specific habitat and other biological requirements of the species are discussed in the current status review and the first Notice of Determination.

Shasta and Keswick Dams

The effects of Shasta and Keswick Dams operations on winter-run chinook salmon are documented in the final rule listing the species as threatened. Based on known effects of these and other Central Valley Project (CVP) facilities on winter-run chinook, NMFS and the Bureau of Reclamation (Bureau) enterd into a formal section 7 consultation under the ESA on April 11, 1991, for the purpose of evaluating the effects of existing CVP facilities and operations on Sacramento winter-run chinook salmon.

On February 14, 1992, NMFS issued a biological opinion to the Bureau and the California Department of Water Resources (DWR) addressing the effects of CVP and the State Water Project (SWP) operations in 1992 on the winter-run chinook based on the assumption of a critical water supply (NMFS 1992a). The biological opinion concluded that the proposed operation of the CVP and SWP in 1992 would likely jeopardize the continued existence of winter-run chinook. With respect to Shasta and Keswick dams, NMFS identified specific reasonable and prudent alternatives to avoid jeopardy to winter-run chinook salmon in 1992. These reasonable and prudent alternatives required the Bureau to maintain (1) a minimum flow of 3,000 cubic feet/second (cfs) from Keswick Dam into the Sacramento River to ensure safe rearing conditions in the upper river for juveniles produced in 1991 and (2) daily average water temperature in the Sacramento River between Keswick Dam and Ball's Ferry (distance of 26 miles) of no more than 56 °F from April 15 through September 30, and of no more than 60 °F from October 1 through October 31 to ensure that safe temperature conditions were provided for developing eggs, pre-emergent fry and juveniles. The reasonable and prudent alterntive also required the establishment of an oversight committee to monitor implementation of these and other measures. This committee has met several times since the opinion was issued to ensure that water allocation plans of the Bureau and operations of the Bureau and DWR were consistent with the reasonable and prudent alternatives. Since this consultation only addressed the 1992 operations of the CVP and the SWP, NMFS is consulting with the Bureau and DWR on the long-term operations of CVP and SWP facilities. NMFS has requested the Bureau to complete its portion of the consultation by September 1, 1992, in order for NMFS to issue an opinion covering future operations by December 31, 1992.

In July 1991, the Bureau issued a Record of Decision to construct a permanent temperature-control device at Shasta Dam that would allow water to be drawn into the power penstocks from varying levels in Shasta Lake. This device would allow the Bureau to improve control of river temperatures which would significantly benefit winter-run chinook without foregoing the opportunity to generate power from the water released through the dam. As part of the long-term consultation on operations of the CVP, NMFS will address the need for a permanent temperature control device at Shasta Dam.

Spawning habitat in the Sacramento River has also been degraded by decreases in the rate of replenishing gravel suitable for spawning (NMFS 1992c). In 1990, 100,000 cubic yards (cy) of spawning gravel were placed in the upper Sacramento River between Salt Creek and Clear Creek by DWR to restore degraded spawning riffles in areas of the river used by winter-run chinook salmon (CFGC 1991). Additional gravel restoration is probably unnecessary until there is a significant increase in the winter-run chinook salmon spawning population since it is unlikely to be a factor in the species recovery (CFGC 1992).

Adult winter-run chinook can also be adversely impacted by operation of the spillway at Keswick Dam. Overflow of water from the stilling basin due to the operation of the spillway attracts upstream migrating adult salmon into the basin at the base of the dam where they become trapped (NMFS 1992a). CDFG and USFWS have conducted fish rescue operations at the stilling basin and removed hundreds of trapped salmon. Until the facility is structurally modified to allow fish free passage back to the river or without a fish rescue operation, it is likely that some spawning winter-run chinook salmon will be lost. NMFS plans to address problems with the Keswick stilling basin as part of the consultation with the Burau on long-term operations of the CVP.

Red Bluff Diversion Dam

Another serious habitat concern for winter-run chinook salmon is the impediment to adult upstream migration by operation of the Bureau's Red Bluff Diversion Dam (NMFS 1992c). Since 1988, the Bureau has agreed, under the terms of a Cooperative Agreement with NMFS, FWS, and CDFG, to leave the dam gates in the raised or open position from December 1 to April 1 each year to assist winter-run spawners in passing further up river where temperature conditions are more suitable for successful spawning and egg incubation. CDFG estimated that 98 and 93 percent

of the run spawned above the dam during 1988–1989 and 1989–1990, respectively, because of this action. In 1990–1991, the gates remained continuously open from December 10, 1990, until May 3, 1991, with all of the observed spawning activity occurring upstream of the Red Bluff Diversion Dam (NMFS 1992a).

The Bureau was expected to have difficulty controlling temperatures in the upper Sacramento River during 1992 due to an anticipated critical water supply; therefore, NMFS addressed operation of the dam gates in the biological opinion issued to the Bureau. Specifically, NMFS identified a reasonable and prudent alternative that required the Bureau to maintain dam gates in the raised position an additional month, or until May 1 1992 (NMFS 1992a). This alternative was designed to allow maximum passage of the 1992 winter-run spawning population past Red Bluff Diversion Dam and into the upper river where temperatures were most likely to be controlled by the Bureau.

Operation of the dam and its associated diversion facilities (Tehama-Colusa Canal) can have an adverse effect on juvenile winter-run salmon during their outmigration. To improve operations of the dam and the canal and to mitigate impacts to fish populations, the Bureau installed "state-of-the-art" drum screens and a bypass system at the canal headworks in 1990. Although initial studies have provided evidence that the entrainment problem has been greatly diminished by the new screens (Johnson 1991), a comprehensive evaluation of the bypass system effectiveness has not yet been conducted (CDFG 1992).

Because outmigrating winter-run juveniles can be adversely impacted by operation of the dam and the canal, NMFS addressed these impacts in the biological opinion issued to the Bureau. NMFS estimated that 45 to 80 percent of the juveniles produced by the 1992 spawning population could encounter Red Bluff Diversion Dam and be exposed to adverse survial conditions prior to December 1, 1992, when the gates would normally be raised under the existing Cooperative Agreement (NMFS 1992a). Therefore, the opinion identified a reasonable and prudent alternative that required the Bureau to raise the dam gates by November 1, 1992, to ensure survival of outmigrants was substantially increased (NMFS 1992a).

NMFS, FWS, and the Bureau are evaluating alternatives to the existing facilities at Red Bluff Diversion Dam (CFGC 1992). FWS found that a stand-alone screw pump would be the most efficient at passing fish downstream. The Bureau plans to complete an appraisal level study and begin public hearings to receive input from interested parties on a screw pump proposal.

Anderson Cottonwood Irrigation District Diversion Dam (ACID)

ACID operates a diversion dam and two diversion facilities on the upper Sacramento River at Redding, California. The adverse impacts of these facilities on winter-run chinook are well documented (NMFS 1992c).

ACID's Bonneyview water diversion facility (65 cfs capacity) is located downstream from the ACID dam in an important winter-run chinook spawning area and is currently unscreened. During the irrigation season which coincides with juvenile winter-run emergence and early outmigration, juveniles are entrained by the facility and either directly killed by passage through pumps or are diverted into the associated irrigation canal from which they cannot escape.

In late 1990, CDFG obtained funds to install new screens on the Bonneyview pumps (CFGC 1991; however, the screens were never installed because of disagreements between ACID and CDFG. Based on a fyke net sampling and salvage operation conducted from August 15 to October 3, 1991, CDFG estimated that from 1.23 to 2.45 percent of the 1991 winter-run fry production had been taken by the unscreened Bonneyview diversion facility during this period. On September 27, 1991, the State of California filed suit against ACID seeking a temporary restraining order and permanent injunction to stop the district from taking winter-run salmon under the California Endangered Species Act. Although a temporary injunction was issued, the court refused to issue either a preliminary or permanent injunction citing state endangered species act limitations on takings.

Based on the significant winter-run chinook take that was documented in 1991, NMFS issued a Notice of Violation and Assessment, including a penalty of $700,000, to ACID on December 19, 1991, for violating the ESA by unlawfully taking a threatened species. A hearing before an Administrative Law Judge is scheduled for June 1992. NMFS notified ACID that protective screening measures needed to be in place by early July 1992 to prevent further taking of juvenile winter run in 1992, and that permanent protective measures needed to be in place by July 1993. ACID has developed preliminary plans and applied for a Corps of Engineers permit to install an impervious barrier and screens at the facility by early July 1992. NMFS will consult with the Corps under section 7 of the ESA to evaluate the impact of installing and operating the ACID screening protective measures on winter-run chinook salmon.

Pollution

Pollution in the Sacramento River has also degraded winter-run chinook salmon spawning habitat. In particular, NMFS is concerned about heavy metal-contaminated runoff entering the upper Sacramento River from inactive mining operations at Iron Mountain Mine (IMM). Heavy metal concentrations from this runoff can reach levels that are lethal to winter-run chinook eggs and juveniles (NMFS 1992c).

The Environmental Protection Agency (EPA) has placed IMM on the Superfund Priority List. The State of California and EPA are currently considering options for a long-term solution to control the potential release of toxic chemicals from IMM into the Sacramento River. The owner responsbile for IMM is proposing to plug the mine and flood it with water to extinguish the chemical reaction that is creating the problem (CFGC 1992). NMFS has reviewed and evaluated long-term remediation alternatives, and intends to consult with EPA, under section 7 of the ESA, on any specific remedial plans that are proposed.

NMFS is also concerned that out-migrating juvenille winter-run chinook may be adversely impacted by the disposal of contaminated dredge sediments in San Francisco Bay. The residence time for out-migrating winter-run chinook salmon in the Bay is thought to range from 1 week to more than 2 months depending on the water year type (NMFS 1992b). Because winter-run chinook salmon prey may bioaccumulate and biomagnify contaminates orginating from in-bay disposal of contaminated dredge sediments, outmigrating juvenile winter-run could also be exposed to these contaminants as they migrate and forage throughout the Bay. NMFS formally consulted with the Corps of Engineers under section 7 of the ESA concerning the effects of in-bay disposal of material dredged from Guadalupe Slough on winter-run chinook salmon in 1991. In a biological opinion issued February 12, 1992, NMFS concluded that disposal of dredged sediments from Guadalupe Slough into the waters of San Francisco Bay was not likely to jeopardize the continued existence of winter-run because of the limited volume (100,000 cy/year for 3 years) of material that would be discharged (NMFS 1992b). The incidental take statement issued with

the opinion required that no disposal of contaminated dredge materials occur in the Bay between January 1 and April 30, and that a monitoring program be established to assess the effects of dredged sediment disposal and contaminant exposure on juvenile winter-run chinook salmon in the Bay. The results of the monitoring program will be submitted to NMFS by January 1, 1993.

NMFS has successfully negotiated reductions in the size of several dredging projects and limits on when disposal of contaminated material in San Francisco Bay is allowed in order to avoid potential adverse affects to winter-run chinook salmon. However, NMFS continues to be concerned about the potential effects of dredging because a large number of dredging projects are anticipated in San Francisco Bay (NMFS 1992b). In 1991, for example, nearly 4 million cy of material were disposed of in San Francisco Bay, and some of the discharged material had higher contaminant concentrations that the material already at the Alcatraz disposal site located in the Bay. In 1992, the Corps is considering approval of dredging projects involving the disposal of another four million cy of material. NMFS has recommended the Corps enter into a comprehensive section 7 consultation that would address all anticipated dredging and in-bay disposal from 1992 through 1995 (NMFS 1992b).

Hydroelectric Projects

The Federal Energy Regulatory Commission (FERC) was considering licensing applications for the Lake Redding and Lake Red Bluff Projects that, if authorized, would have adversely affected winter-run chinook salmon. In 1991, FERC rejected the licensing applications or both projects since they did not have acceptable cost/benefit ratios after meeting environmental requirements.

The city of Redding, California, is currently pursuing a small scale pump-storage hydroelectric project that would increase water temperatures in the upper Sacramento River (NMFS 1992c). NMFS will continue to monitor planning for this project, and if necessary, request the appropriate Federal agency to consult with NMFS under section 7 of the ESA.

Bank Stabilization

Bank stabilization projects in the Sacramento River are believed to adversely affect winter-run chinook salmon rearing habitat (NMFS 1992c). The Corp of Engineers has initiated the Sacramento River Bank Protection Project as a long-range program for construction of bank erosion control works and setback levees (Ecos 1990). Since portions (phase II) of the project could adversely impact juvenile winter-run chinook, the Corps initiated formal section 7 consultation with NMFS in March 1991. On October 28, 1991, NMFS issued a biological opinion that concluded phase II of the project would not likely jeopardize the continued existence of winter-run chinook salmon (NMFS 1991a).

2. Overutilization for Commercial, Recreational, Scientific or Educational Purposes

Commercial and Recreational Fishing

NMFS consulted with the Pacific Fishery Management Council (PFMC) under section 7 of the ESA in 1991 to evaluate the potential effects of the Pacific Ocean Salmon Fishery Management Plan (FMP) on winter-run chinook salmon (NMFS 1991b). A biological opinion was issued to the PFMC on March 1, 1991, that concluded management of the salmon fishery under the Ocean Salmon FMP was not likely to jeopardize the continued existence of winter-run chinook (NMFS 1991b). NMFS also issued a biological opinion to the Council that concluded implementation of Amendment 4 to the Pacific Coast Groundfish FMP would not likely jeopardize the continued existence of winter-run chinook salmon as a result of incidental bycatch.

Since 1987, the CDFG has implemented seasonal fishing closures in the upper Sacramento River and monitored the recreational salmon catch (NMFS 1992c). In 1991, the Sacramento River was closed to salmon fishing from January 15-July 15 between Carquinez Strait and Bend Bridge, and until August 1 between Bend Bridge and Deschutes Road Bridge (CFGC 1991). In the ocean adjacent to the Golden Gate, there is a "Sacramento River Winter-Run Chinook Conservation Closure" where fishing is prohibited from March 2 through March 31. CDFG is also assessing proposed changes to the trout fishery angling regulations for their potential effect on winter-run chinook salmon.

Scientific Studies

In 1991, NMFS issued a scientific research permit, under section 10 of the ESA, to the FWS to conduct scientific research on Sacramento River winter-run chinook salmon (NMFS 1992c). The permit authorized (1) A census of juvenile downstream migrants and habitat use, (2) radio tracking of upstream migrating adults, (3) a captive propagation program at Coleman National Fish Hatchery, (4) an evaluation of juvenile entrainment into the Tehama-Colusa Canal, (5) temperature tolerance experiments with incubating eggs, and (6) studies on the differentiation of chinook salmon runs.

The FWS had initiated programs at the hatchery to hold, spawn, and rear winter-run chinook salmon prior to 1991 (Ecos 1990); however, they were not successful (NMFS 1992c). In 1991, despite the low numbers of fish available (only 22), the FWS was able to successfully hold and spawn six females. Nearly 29,000 eggs were spawned, and from these, 12,000 juveniles survived. On January 21, 1992, the FWS released about 11,000 coded-wire tagged juvenile winter-run chinook salmon into the Sacramento River near Redding, California. Because of concerns that these juveniles would be diverted from the Sacramento River into the Sacramento-San Joaquin Delta through the Bureau's Delta Cross Channel during their outmigration, NMFS, FWS, and the Bureau agreed to a plan in late January 1992 that involved monitoring the winter-run chinook salmon outmigration and closure of the cross channel to protect juveniles from being diverted. As a result of these efforts, the Bureau closed the Delta Cross Channel on February 3, 1992, to protect outmigrating juvenile winter-run chinook salmon.

In April 1992, the FWS applied for a modification of its scientific research permit to initiate a captive breeding program using about 1,000 juveniles that remained from the hatchery propagation effort in 1991. The FWS is proposing to transfer these fish from the hatchery to the California Academy of Sciences-Steinhart Aquarium and the University of California's Bodega Bay Marine Laboratory for extended captive rearing with subsequent transfer back to the hatchery for use as broodstock. A primary objective of the program is to provide insurance against extinction or loss of unique genetic variability until the wild stock can recover and sustain itself.

FWS annually conducts underwater counts of winter-run chinook salmon redds between ACID and the Redding water supply intake. In July 1991, 23 redds were observed (CFGC 1991). This information, in conjunction with fish counts at Red Bluff Diversion Dam and the results from CDFG's annual aerial winter-run chinook salmon redd surveys, is used to estimate the winter-run chinook salmon spawning run size.

3. Disease or Predation

The magnitude and extent of predation on winter-run chinook salmon throughout the Sacramento River has not been determined. However, studies indicate that predation at Red Bluff Diversion Dam, primarily by squawfish, can significantly contribute to the mortality of downstream winter-run chinook salmon migrants (NMFS 1992c). The FWS has undertaken periodic electrofishing below the dam which may be useful in developing a relative squawfish abundance index (CFGC 1991). All of the fisheries agencies believe that before squawfish control is possible, more must be learned about their life history. In 1992, the FWS plans to study predation at the fish bypass outfall as part of its continuing impact evaluation at Red Bluff Diversion Dam.

The potential for high levels of predation also exists at the Glenn-Colusa Irrigation District (GCID) diversion facility and other manmade structures such as the DWR's Suisun March Salinity Control Structure and Clifton Court Forebay. Squawfish and striped bass predation has also been observed on juvenile salmonids released back into the Sacramento River from salvage operations conducted at the CVP and SWP fish protection and export facilities in the lower Sacramento-San Joaquin Delta.

Several groups raised concerns in March 1992 about the possible effects of CDFG's striped bass enhancement and management program on winter-run chinook salmon. CDFG's striped bass stocking program has expanded in recent years as a result of mitigation agreements with the DWR and the Pacific Gas and Electric Company. NMFS reviewed CDFG's proposed enhancement program for 1992 and recommended several changes, as well as the implementation of studies designed to assess the magnitude of striped bass predation on winter-run chinook salmon. NMFS will continue to monitor the CDFG program, and, if necessary, request CDFG to apply for an ESA section 10 incidental take permit.

4. The Inadequacy of Existing Regulatory Mechanisms

Relevant laws that constitute existing regulatory mechanisms were discussed in the final rule listing winter-run chinook salmon as threatened. These laws were described as providing inadequate mechanisms for restoring winter-run chinook salmon in the Sacramento River. Since the final listing of Sacramento winter-run chinook salmon as a threatened species under the ESA, the run has continued to decline. This may indicate that regulatory mechanisms currently in place were not applied effectively, or that they were insufficient.

5. Other Natural or Manmade Factors Affecting the Continued Existence of the Species

Juvenile winter-run chinook salmon are subject to entrainment by hundreds of unscreened or inadequately screened diversions during their outmigration to the Pacific Ocean. These diversions range from small siphons diverting 20 cfs to the large export facilities operated by the Bureau and DWR in the southern Delta that have the combined capacity of pumping approximately 12,000 cfs of water daily.

Glenn-Colusa Irrigation District (GCID)

The GCID diversion facility located near Hamilton City, California, is the single largest diverter of water on the Sacramento River with the capacity to take up to 3,000 cfs daily. Inadequate fish screens at the facility allow entrainment of juvenile salmon, including small winter-run juveniles that are dispersing in the river system during the peak of the irrigation season. In 1990, the Corps initiated a section 7 consultation with NMFS to assess the impacts of proposed maintenance dredging and other in-river construction at the GCID facility on winter-run chinook salmon. In May 1991, NMFS issued a biological opinion that concluded maintenance dredging and construction and removal of a seasonal earthfill weir were likely to jeopardize the continued existence of winter-run chinook salmon (NMFS 1991c). NMFS identified a reasonable and prudent alternative that included gradient restoration work in the main channel of the Sacramento River near the facility and construction of a new "state-of-the-art" fish screen facility by GCID at the head of intake channel leading to the pumping and diversion facility.

GCID failed to act on the Corps permit or acknowledge acceptance of NMFS's reasonable and prudent alternative and also would not agree to apply to NMFS for a section 10 incidental take permit under the ESA that would authorize the taking of winter-run chinook salmon at the facility. Accordingly, NMFS requested the Department of Justice to seek injunctive relief in August 1991 to reduce the taking of juvenile winter-run chinook salmon at GCID's pumping and diversion facility. On August 16, 1991, the U.S. District Court in Sacramento issued a temporary restraining order (TRO) requiring GCID not to exceed a pumping rate of 1,100 cfs from August 19 to August 29, 1991, and by mutual agreement, the conditions of the TRO were extended through December 31, 1991. On January 9, 1992, the court issued a permanent injunction against GCID that prohibited pumping at the facility from July 15 through November 30. On March 31, 1992, the Court modified the permanent injunction by incorporating the terms and conditions of a joint stipulation agreed to between GCID and the United States. Under these terms and conditions, GCID will be allowed to pump water on a restricted basis between August 1 and November 30, in exchange for the District's commitment to implement a long-term solution to problems at the facility. GCID is currently revising a section 10 incidental take permit application that was submitted to NMFS in March 1991 and found to be incomplete. GCID has applied for a Corps permit to implement interim fish protection measures for winter-run chinook salmon that were identified in the joint stipulation that modified the permanent injunction. NMFS will conduct a section 7 consultation with the Corps concerning the effects of permit issuance on winter-run chinook salmon.

Delta Export Facilities of the CVP and SWP

The Bureau and the DWR operate facilities in the Sacramento-San Joaquin Delta to convey Sacramento River water into and through the Delta (i.e., the Delta Cross Channel), and to export water out of the Delta (i.e. the Bureau's Tracy Pumping Plant and the DWR's Byron Pumping Plant). The operations of these and other CVP and SWP facilities, which are coordinated through the Coordinated Operations Agreement between the Bureau and DWR, have the potential to adversely impact winter-run chinook salmon.

Outmigrating juvenile winter-run chinook salmon are diverted from the Sacramento River into the central and southern Delta when the DCC is open (NMFS 1992a). The proportion of winter-run chinook salmon diverted through the DCC is thought to be directly related to the amount of water diverted from the Sacramento River through the Delta Cross Channel. The survival of juvenile winter-run chinook salmon diverted through the DCC is reduced due to factors such as higher predation levels, higher water temperatures, exposure to a larger number of unscreened diversions, decreased water quality, and a complicated channel system that makes it difficult to find passage to the ocean (NMFS 1992a). To address the potential adverse effects of operation of

the Delta Cross Channel gate on juvenile winter-run chinook salmon survival, especially during the extremely critical water supply that was anticipated in 1992, NMFS identified a reasonable and prudent alternative in the February 1992 biological opinion that required the Bureau to close the Delta Cross Channel gate from February 1 through May 1 in 1992.

In the incidental take statement that was attached to the biological opinion, NMFS stated that operation of the CVP and SWP in 1992 was expected to take incidentally only a small percentage of the total winter-run chinook salmon outmigrants produced in 1991. Based on winter-run chinook salmon loss monitoring at the CVP and SWP facilities in the Delta by CDFG in February and April 1992, NMFS determined that reinitiation of consultation was necessary. Following consultation with the Bureau and DWR, NMFS amended the incidental take statement with new terms and conditions that (1) restricted the combined daily water export rate from the CVP and SWP facilities in the Delta to 1,200 cfs between April 11 and April 30, 1992, (2) required the Bureau and DWR to reinitiate consultation with NMFS if take exceeded a specified level (400 fish) during this period or there was evidence to indicate that winter-run chinook salmon outmigration would substantially continue beyond April 30, 1992, and (3) required the Bureau and DWR to support efforts to develop a more refined and accurate method for determining the level of taking incidental to pumping operations at the CVP and SWP facilities.

Suisun Marsh

The operation of DWR's Suisun Marsh Salinity Control Gates on Montezuma Slough can adversely affect winter-run chinook salmon by diverting outmigrating juveniles from the Sacramento River into Montezuma Slough where conditions for survival are lower due to a longer migration route, increased water temperatures and levels of predation, and exposure to numerous unscreened water diversions (Brown and Greene 1992). Upstream migrant adult winter-run chinook salmon that enter Montezuma Slough may also be blocked or delayed by the operation of the gates. NMFS included a reasonable and prudent alternative in the February 1992 biological opinion that required the gates either to be closed from March 1 through April 15, or that DWR provided evidence that unscreened diversions in the Slough were not operated during this period. DWR and CDFG conducted monitoring during this period and provided documentation to NMFS that these diversions were not operated.

Proposed Delta Projects

Additional water management facilities have been proposed by DWR (i.e., North Delta Water Management Project, South Delta Water Management Project, and Los Banos Grandes Project) that would increase the capacity to convey water through the Delta, potentially increase delta exports, and increase water storage capability south of the Delta. NMFS is concerned that these and other projects in the Delta (e.g., Los Vaqueros project of the Contra Costa Water District, Delta Wetlands project, etc.) have the potential to adversely impact winter-run chinook salmon. Currently, NMFS is informally consulting with the Corps on some of these projects and expects to consult with the Bureau on others. However, because these are major construction projects with Federal involvement, formal section 7 consultation will be required before construction can begin.

Droughts/El Niño

Natural factors of greatest concern to NMFS are drought conditions and the oceanographic phenomenon known as El Niño (NMFS 1992c). The effects of the extended drought on California's water supply were partially mitigated by the Bureau in 1990 and 1991 through low-level releases from Shasta Dam. Measures identified by NMFS in the biological opinion on 1992 CVP operations are expected to address drought related temperature concerns. Also, NMFS expects the consultation with the Bureau and DWR on the long-term operations of existing CVP and SWP facilities will address the need for a permanent temperature control facility at Shasta Dam. The only measure to mitigate the impact of a strong El Niño may be hatchery rearing to supplement natural smolt production from returning spawners that survive the poor ocean conditions. If the hatchery program continues to be successful, it may provide the necessary smolt production to offset the adverse effects of El Niño events.

Conclusion

Although conservation measures have been implemented since 1987 specifically to improve habitat conditions for Sacramento River winter-run chinook salmon, the population has continued to decline precipitously. In 1989, 1990, and 1991, for example, the run size was estimated at only 547, 441, and 191, respectively. These levels represent a dramatic decline in the run size of nearly 99 percent over a 25-year period. The 1990 spawning population of 441 winter-run chinook salmon should have been primarily the result of surviving progeny from the 1987 spawning population of 2,236 fish. Even with the implementation of protective measures (e.g., the Red Bluff Diversion Dam gates were open between December 1, 1986 and April 1, 1987, and low-level releases from Shasta Dam occured), the number of adults returning to spawn in 1990 represented a decline of 80 percent in one generation. Similarly, the estimated 1991 run size of 191 fish was primarily the result of surviving progeny from the 1988 spawning population of 2,085 fish. The 1991 spawning escapement represents a dramatic decline of 90 percent in a single generation and indicates that the 1988 year class was nearly a total failure (USFWS 1991) in spite of measures that were implemented in 1987–1988.

Modification and loss of spawning and rearing habitat, impediment of adult upstream and juvenile downstream migration, predation, pollution, and entrainment in water diversions on the Sacramento River and in the Delta continue to affect adversely the recovery of winter-run chinook salmon. Further, it is likely that the ongoing drought (1987–1992) in California has exacerbated these impacts. The 1991–1992 El Niño that is in progress could also influence the number of winter-run chinook salmon that return to spawn in 1992 and 1993.

NMFS estimates that for a population with about a 3 to 5 year life cycle, such as winter-run chinook salmon, an annual run size of about 200 to 300 fish is sufficient to avoid any serious loss of genetic diversity. A somewhat larger population size (e.g., 500 spawners per year) is necessary to provide some buffer in the short term against natural fluctuations in demographic and environmental parameters. Because of the low levels of run size in 1990 and 1991, NMFS believes the population will begin losing genetic diversity through genetic drift and inbreeding. Also, such small population sizes are vulnerable to major losses from random environmental events such as droughts and El Niño.

Based on these low run sizes and the continuing threats to the population, NMFS believes that the winter run of chinook salmon in the Sacramento River is in danger of becoming extinct, and that a designation of endangered under the ESA more accurately reflects the current status of the population.

Available Conservation Measures

Conservation measures provided to species that are listed under the ESA include listing, recovery actions, implementation of certain protective measures, and designation and protection of critical habitat. Some of the most useful protective measures are contained in section 7 of the ESA. Pursuant to section 7, Federal agencies are required to conduct conservation programs for endangered species and to consult with NMFS regarding the potential effects of their actions on species under NMFS' jurisdiction.

Since this species was listed as a threatened species on an emergency basis in August 1989, NMFS has conducted formal section 7 consultations with Federal agencies whose actions may affect the continued existence of the winter-run chinook salmon (NMFS 1991a, 1991b, 1991c, 1992a, 1992b). Currently, NMFS is consulting under section 7 with the Bureau and DWR concerning the long-term operation of the CVP and SWP facilities. Consultations are anticipated with the Corps on all future modifications or construction of siphons and pumps on the Sacramento River and in the Delta to ensure they are adequately screened, and on major DWR projects proposed for the Delta and elsewhere.

Section 10 of the ESA provides for addressing the effects of private (non-Federal) actions on endangered species. NMFS is currently working with GCID to address the impacts of their major diversion facility on winter-run chinook salmon through the section 10 process.

Also, NMFS will continue to participate in the State's review of sport and commercial fishing regulations (NMFS 1992c). Due to the continued decline of the eastern North Pacific salmon stocks, the PFMC recently proposed to reduce the allowed catch of all salmon on the west coast of the U.S. in the attempt to rebuild these stocks. Winter-run chinook salmon may benefit from these actions. Through consultations under state and Federal laws, if is possible that a State/Federal regulatory regime will be developed to ensure that the winter-run chinook salmon population is not adversely affected by sport or commercial fishing.

NMFS recently reappointed a recovery team to develop a recovery plan for Sacramento River winter-run chinook salmon. The recovery team is comprised of fishery resource managers, experts on winter-run chinook salmon biology and other conservation specialists. Over the next year, the team will develop a comprehensive recovery plan for this species.

Critical Habitat

Section 4(a)(3)(A) of the ESA requires that, to the extent that it is prudent and determinable, critical habitat be designated concurrently with the listing of a species. However, unlike designating a species as threatened or endangered, economic impacts must be considered when designating critical habitat. When winter-run chinook salmon was listed as threatened, no critical habitat was designated because an economic impact analysis had not been conducted. However, this analysis has been completed, and NMFS is currently developing a proposal for designating critical habitat. NMFS believes that the delay in designating critical habitat has not been detrimental to the conservation of the winter-run chinook salmon since section 7 consultations address Federal actions that may adversely affect the species as well as its habitat. The prohibitions on taking the species continue to be in effect, and any action that is likely to adversely modify or destroy habitat is considered a take and will be addressed by NMFS.

Classification

The 1982 Amendments to the ESA (Pub. L. 97-304), in section 4(b)(1)(A), restrict the information that may be considered when assessing species for listing. Based on the limitation of criteria for a listing decision and the opinion in *Pacific Legal Foundation* v. *Andrus*, 675 F. 2d 829 (6th cir., 1981), NMFS has categorically excluded all endangered species listing from environmental assessment requirements of the National Environmental Policy Act (48 FR 4413, February 6, 1984).

As noted in the Conference report on the 1982 amendments to the ESA, economic considerations have no relevance to determinations regarding the status of species. Therefore, the economic analysis requirements of Executive Order 12291, the Regulatory Flexibility Act, and the Paperwork Reduction Act are not applicable to the listing process.

References

Brown, R.L., and S. Greene. 1992. Draft Biological Assessment on Effects of Central Valley Project and State Water Project Delta Operations on Winter-run Chinook Salmon. California Department of Water Resources. 130 pp.

CFGC. 1991. 1991 Progress Report to the Fish and Game Commission on recovery effects for Sacramento River winter-run chinook salmon. August 6, 1991. California Fish and Game Commission, Sacramento, California. 9 pp.

CFGC. 1992. 1992 Progress Report to the Fish and Game Commission on recovery efforts of Sacramento River winter-run chinook salmon. February 28, 1992. California Fish and Game Commission, Sacramento, California. 7 pp.

Ecos, Inc. 1990. Biological date report regarding Sacramento River Bank Protection Project impacts on winter-run chinook salmon, Third Phase. Sacramento, California. 131 pp.

Johnson, R.R. 1991. Entrainment evaluation of the newly installed Red Bluff Diversion Dam downstream migrant fish protection facilities. USFWS No. AFF1-FRO-91-17. Red Bluff, CA.

NMFS. 1991a. Endangered Species Act Section 7 Biological Opinion on the Sacramento Bank Protection Project, Second Phase. Southwest Regional Office, National Marine Fisheries Service.

NMFS. 1991b. Endangered Species Act Section of Biological Opinion on Pacific Coast Whiting Fishery. Southwest Regional Office, National Marine Fisheries Service.

NMFS. 1991c. Endangered Species Act Section 7 Biological Opinion on U.S. Army Corps of Engineers granting a permit to Glenn-Colusa Irrigation District to conduct maintenance dredging and construct and remove a seasonal earthfill weir. Southwest Regional Office, National Marine Fisheries Service.

NMFS. 1992a. Endangered Species Act Section 7 Biological Opinion on 1992 Central Valley Project operations. Southwest Regional Office, National Marine Fisheries Service.

NMFS. 1992b. Endangered Species Act Section 7 Biological Opinion on maintenance dredging of Guadalupe Slough and disposal of dredge material at the Alcatraz Disposal Site in San Francisco Bay. Southwest Regional Office, National Marine Fisheries Service.

NMFS. 1992c. Endangered Species Act Status Review: Sacramento Winter-Run Chinook Salmon (*Oncorhynchus tshawytscha*). Protected Species Management Division, Southwest Region, National Marine Fisheries Service, Long Beach, California.

USFWS. 1991. Letter (12/9/91) to the National Marine Fisheries Service to provide comments on their proposal to reclassify the Sacramento winter-run chinook salmon from threatened to endangered status.

List of Subjects

50 CFR Part 222

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Reporting and

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recordkeeping requirements, Transportation.

50 CFR Part 227

Endangered and threatened species, Exports, Imports, Marine Mammals, Transportation.

Dated: June 15, 1992.

Michael F. Tillman,

Deputy Assistant Administrator for Fisheries.

For the reasons set forth in the preamble, 50 CFR parts 222 and 227 are proposed to be amended as follows:

PART 222—ENDANGERED FISH OR WILDLIFE

1. The authority citation for part 222 continues to read as follows:

Authority: 16 U.S.C. 1531–1543.

§ 222.23 [Amended]

2. In § 222.23, paragraph (a) is amended by adding the phrase "Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*)," immediately after the phrase "Snake River sockeye salmon (*Oncorhynchus nerka*)" in the second sentence.

PART 227—THREATENED FISH AND WILDLIFE

3. The authority citation for part 227 continues to read as follows:

Authority: 16 U.S.C. 1531 *et seq.*

§ 227.4 [Amended]

4. In § 227.4, paragraph (e) is removed and paragraphs (f) through (h) are redesignated paragraphs (e) through (g) respectively.

§ 227.21 [Amended]

5. In § 227.21, paragraphs (a) and (b)(1), the phrase "(e), (g) and (h) is removed, and the phrase "(f) and (g)" is added in its place; in paragraph (b)(2), the phrase "(g) and (h)" is removed and the phrase "(f) and (g)" is added in its place.

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